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ABSTRACT

The goal of this action research project goal was to improve students' taking responsibility for their own learning. The targeted population consisted of 120 intermediate and middle school students in 5 classes from 2 middle-class communities in northern Illinois. The lack of student responsibility in the learning process was documented through teachers' anecdotal records, interviews of randomly selected students, and a survey of students' study habits recorded over a 5-month period. Analysis of the probable causes of students' lack of responsibility for their own learning indicated that lack of higher-order thinking skills, lack of ability to transfer learning, and lack of self-motivation were responsible. To address these problems, four major categories of intervention were used in this 3-month program: (1) graphic organizers to aid in visualizing the thinking process; (2) problem-solving strategies; (3) higher-order thinking skills to promote gathering, processing, and applying information; and (4) portfolios to show ownership of their learning. Post-intervention data obtained during cooperative learning activities indicated an increase in students' taking responsibility for learning and an improvement in students' higher-order and critical thinking skills, problem-solving strategies, and self-evaluation. (Ten appendices detail data collection methods, Bloom's Taxonomy, and intervention procedures. Contains 29 references.) (KDFB)

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INCREASING STUDENTS' RESPONSIBILITY FOR THEIR OWN LEARNING

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Submitted in partial fulfillment of the requirements for the degree of Master's of Arts

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Abstract

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DATE: May 1996

SITE: Tinley Park II

TITLE: Increasing Students' Responsibility for Their Own Learning

ABSTRACT: This report describes a program for improving students' responsibility for their own learning. The targeted population consists of intermediate and middle school students in two growing, middle class communities, located in northeastern Illinois. The lack of student responsibility in the learning process was documented through teacher observation.

Analysis of probable cause data reveals that students lack higher order thinking skills and problem solving strategies. Faculty reports students' need for additional growth in critical thinking skills and self-motivation. Reviews of curricula content and instructional strategies reveal a need for higher order thinking skills development and problem solving strategies.

A review of solution strategies suggested by knowledgeable others, combined with an analysis of the problem setting has resulted in the selection of four major categories of intervention: use of graphic organizers to aid in the visualization of the thinking process; use of problem solving strategies; use of higher order thinking skills to promote gathering, processing, and application of information; and the use of portfolios to show growth and development of individual work and allow students to assume ownership of their learning.

Post intervention data indicated an increase in students' responsibility for learning. Students' higher-order thinking skills and problem solving strategies improved. There was also an increase in the students' critical thinking skills and self-motivation. The interventions throughout the study resulted in students becoming more responsible for their learning.

Chapter 1

PROBLEM STATEMENT AND CONTEXT

General Statement of Problem

The attitudes of students in the area of independent learning were inadequately developed, resulting in students not taking responsibility for their own learning. Evidence for this problem was gathered from teacher observations, surveys, interviews and anecdotal notes.

Immediate Problem Context: Setting A

Setting A is a private elementary school that is an extension of the local Roman Catholic Parish. The parish is 62 years old and is one of the fourth largest parishes in the diocese. The parish provides spiritual growth for 4,000 families, which represents approximately 12,000 individuals, an average of three people per household. The racial make-up of the parish is predominantly Caucasian (90 percent), with a small representation (10 percent) of Asians, Hispanics and African-Americans. The parish is supported by upper-middle to middle class white collar workers, and a small percentage blue collar workers. The parish is presently undergoing expansion to increase the capacity of the church from 750 seats to 1,000 seats. The parish is run by a staff of 10 with the pastor as the leader. The pastor has a council that assists him and is broken down into sub-groups to aid in the leadership and operation of the parish.

The school, which was initially established in the early 1950s, has had 42 graduating classes. It has grown from a one-room schoolhouse to its present size through a series of building additions over the years. The building currently consists of 17 separate classrooms (which includes two science labs), a resource center/library, computer lab, principal's office, the school's administration office, religious education office, teachers' lounge, and a large multi-purpose room. The school operates three first grade classrooms, followed by two classrooms for each subsequent grade level, two through eight.

The school is administered by a principal with assistance from two secretaries. Leadership is shared with an elected school board of seven members and the pastor. The school has 17 full-time classroom teachers, certified by the State of Illinois and approved by the Archdiocese of Chicago. The school also employs seven additional certified teachers to provide specialized educational growth in the areas of music, band, art, physical education, resource assistance, computer science and library skills. The school also provides a religious education coordinator who aids in the spiritual growth of the children. The salary schedule ranges from \$18,650 for a first-year teacher to \$29,000 for a veteran teacher of 29 years. Presently the average teacher has been there seven years with an overall teaching experience of 15.5 years. The faculty has an attendance record of 94 percent. Teachers who have completed 15 credit hours towards a Master's Degree receive a salary increase of \$750. The school currently has four teachers working toward their Master's Degree.

The school provides Catholic education for the student population of 400 children. The racial/ethnic ratio consists of 90 percent Caucasian and 10 percent Asians,

Hispanics and African-Americans. There is a 25:1 student/teacher ratio. The attendance rate for the students is 92 percent. The cost of tuition for one child is \$1,420, for two children from the same family, \$2,180 and for three plus children \$2,670. The annual cost to educate one student is approximately \$2,800. The average school income collected per student is \$1,430. The school relies heavily on the financial assistance of the entire parish. Organizations within the parish provide financial help through a variety of fund raising activities throughout the year, which make it possible to maintain the parish school.

The school is traditional with a philosophy that recognizes the importance of the spiritual and academic development of all children. The school believes in creating a Christian educational community through setting an atmosphere in which growth and learning take place. Faith impels this school to design instructional activities in ways that free the learner to develop his/her potential. The work of each teacher must be directed toward finding the best possible learning design for each child. Religious education provides doctrinal instruction, liturgical experiences, involvement with the living Church and development of moral values. Religion is not just a subject, but the foundation of the school curriculum which permeates the rest of the areas of learning. Religion is a way of life.

The curriculum centers on the development of children as individuals, thus aiding them to become valuable members of society and assisting them in realizing a greater love of God through knowledge. The school fosters the development of a set of values and attitudes in all the children that respect the rights of others as individuals and as a group.

Some of the school's special programs include first aid, hands-on science, pre-algebra, algebra, Drug Awareness Resistance Education (D.A.R.E.), after school tutoring and extended day. The school also provides extracurricular activities such as yearbook, student council, after-school band, and sports programs.

Immediate Problem Context: Setting B

Setting B is part of an elementary school district that covers approximately 32 of the township's 36 square miles. The township population is currently estimated at 20,716 with the prediction for the year 2010 being 31,000. The district expects its student enrollment to increase by at least 140 students annually for the next three to five years. The district's current student population is 3,200. Class size is 25-27 students in grades K-3 and 27-29 students in grades 4-8. Beginning in 1995-1996, eight buildings will house the student population: two kindergarten centers; three 1-3 centers; two 4-6 centers, and one junior high 7-8 center.

The district operates its own transportation system. Thirty buses travel a total of 1,450 miles daily to transport over 93 percent of the students to their respective schools. Hot lunch service is available to students in every building except the kindergarten centers where half-day academic programs are conducted. Also, various types of specialized instruction classes are housed in the district.

The district's administrative staff includes a superintendent, two assistant superintendents, a business manager, six principals, and one assistant principal. Its teaching staff is made up of 120 classroom teachers, four librarians, ten learning disability teachers, four speech therapists, three guidance counselors, two school nurses,

and three Chapter I teachers. There are 150 teachers in the district. The average number of years the teachers have been teaching in this district is 9.8, with the average years of all teaching experience being 11.2. The range of teaching experience is 0-30 years. The mean instructional salary is \$31,412. Of the teachers in the district, 82 percent hold a Bachelor's Degree; the other 18 percent hold a Master's Degree or above.

The district's student population is 95.9 percent Caucasian, 2.5 percent Hispanic, .3 percent African-American, and 1.3 percent other. Approximately three percent of the students are considered "low-income" students. Low-income students are from families receiving public aid, living in institutions for neglected or delinquent children, being supported in foster families with public funds, or eligible to receive free or reduced-priced lunches. The students have an attendance rate higher than 95 percent. The pupil to teacher ratio is 24:1.

The district subscribes to the philosophy that education is the fundamental method for social progress and reform. In an effort to attain the goals established for the children of the district, a multiplicity of programs and instructional methods are used. Methods of instruction and learning activities employed by the staff can be characterized as conventional and traditional in nature. The district has always been conscious of the attitudes of the community regarding implementing district changes in educational procedures. To this end, the district's principals have been somewhat conservative in implementing unproven and experimental methods of instruction. The district believes that education is best achieved when students become involved in experiences meaningful to their lives in today's world. It also believes that education should develop habits, attitudes, understanding, and skills necessary for a productive, satisfying life in a

civilized society. Each student should be helped to understand the duties and privileges of responsible citizenship as it is related to him/her as an individual. Some special programs that the district offers to help its students in these areas are Chapter I Reading and Math Programs, cooperative learning, heterogeneous/flexible grouping, music and physical education specialists, Spelldown and Math contests, Student Tutoring Program, Gifted Education Program, and many others.

The district will experience considerable change between the close of the 1994/95 school year and the commencement of the 1995/96 term. With the completion of construction for the new junior high, the old junior high will be converted into a center for grades four through six. Administrative changes will include the employment of a new superintendent, assistant superintendent, and three building principals. It is also anticipated that six additional teachers and four specialists will be hired due to the new building and increased enrollment. Several additional educational support personnel will also be added to the staff.

The Surrounding Community: Setting A

Setting A is located 29 miles southwest of the Chicago Loop in the state of Illinois. The area was first settled by German immigrants in the 1830s and became incorporated in 1892. Settlers populated the area because of the Chicago, Rock Island, and Pacific Railroad that still runs through the suburb.

In recent years this once small community has experienced a rapid growth in both population and area. According to the 1992 Census, 39,696 individuals reside in this village. The average cost of a home is \$145,072. Ninety-five percent of the residents are

Caucasian. Other ethnic groups include Hispanics, African-Americans, Asians, and Native Americans. The mean income per family is \$56,357. The median income per family is \$49,105 with the median per capita income being \$15,518. Most of the employed residents who are 16 years and over either work in administrative support services (including clerical jobs), production and repair occupations, sales, managerial positions, and professional specialty occupations.

Since the 1950s, the area has annexed almost 43 square miles of land. This land has been used for housing, industrial development, office parks, business complexes, hotels, motels, restaurants, meeting facilities, and community parks.

In 1992, business tax receipts totaled \$3,203,715. This money was collected from 467 businesses, 486 retail stores, and more than 14 restaurants. The property tax rate for home owners in 1994 was nine percent of assessed valuation.

The village operates under a council-manager form of government. This type of government consists of a mayor, village manager, village clerk, and six trustees. Many village commissions are staffed by volunteers from businesses and the private sector.

The suburb has not only the largest all-volunteer fire department in Illinois, but also the largest neighborhood watch program in the state. The Emergency Services and Disaster Agency (ESDA) and Civil Defense are responsible for weather spotting, medical and security services, and traffic enforcement.

The village also has many service organizations and special interest groups, such as the Food Pantry, the Youth Commission, the American Legion, the Veterans of Foreign Wars, the Jaycees, and senior citizen groups.

In order to service the health and spiritual well-being of its citizens, the community has four medical centers and 20 religious organizations that represent most of the major denominations. There are nine fully equipped and staffed hospitals that are located in the area.

The majority of the elementary age children attend schools in either School Districts 140, 145, or 146. Most of the high school students are enrolled in either District 228 or 230. The suburb has a variety of private and parochial elementary and high schools within the area. Members of the community are able to attend any of the four local community colleges or seven colleges and universities in the Chicagoland area.

According to the 1990 Census of people who were 25 years and over, 18 percent did not receive a high school diploma, 34 percent received a diploma from high school, 30 percent had attended some college, 13 percent had received a bachelor's degree, and 5 percent received a graduate or professional degree.

The Surrounding Community: Setting B

Incorporated in 1946 by a small group of merchants serving the farming community just east of Joliet and 36 miles southwest of Chicago, the village has been quietly and slowly developing as a well-planned, small town community dedicated to preserving its country atmosphere and foundation of American pride.

With a current population of only 10,562, the village has approximately 3,750 households, averaging almost 100 newly constructed homes a year through the efforts of local independent builders. The median home value in the village is approximately

\$109,700. Its incorporated area is about five square miles or approximately 1,500 acres with 1,800 acres under annexation.

The average age of persons living in the community is 31.5. The population is 53 percent female and 48 percent male. The population is 95 percent Caucasian, with other races including African-American, Eskimo, Asian, Korean, and Hispanic. Also, the population consists of white collar workers, with a small percentage of blue collar workers. The mean income per family is \$47,540. The median income per family is \$45,860, with the median per capita income being \$15,459.

The village operates on a council manager form of government, which includes a mayor, trustees, and administration. The community is the home of four banks, 12 schools (two school districts), three hotels, 25 restaurants, 12 churches (11 Protestant, one Catholic), 14 parks, two country clubs, an 18-hole golf course, and one public swimming pool.

Three hospitals are five to 20 minutes away from the village. Public paramedic and private ambulance services are available. The village police department is staffed by 16 full-time officers and four part-time officers. The department offers a number of crime prevention services which are available to every resident. Some of these programs include "Neighborhood Watch", "Latch Key Kids", "I-Search", "Operation Identification", and "Speakers Bureau". In addition to the full and part-time staff, the police department is supported and assisted by an auxiliary police unit staffed by volunteers. The village is serviced by 43 volunteer firefighters.

The village is served by two school districts, one elementary district, and one high school district. The elementary school district covers 32 square miles and has a student

enrollment of about 3,200 students. With 151 instructional staff members and 107 other educational support employees, the district teaches 31 subjects on a budget of \$10.7 million per school year. This breaks down to \$3,344 spent per student, per year. Two of the district's schools were included in the 200 schools nationwide that received blue-ribbon awards.

The high school district has an enrollment of about 3,300 students on two campuses. The district employs 180 instructional staff members and 59 noncertified employees. Fifty-four percent of the professional staff have one or more Master's Degrees. The schools provide three curricula: College Prep, Comprehensive Vocational Training, and a general curriculum. According to the "Profile of the Class of 1993", seventy-four percent of the class planned to attend college or other post secondary education. Twenty-one percent intended to immediately enter the work force.

The community is also served by a Catholic elementary school and a Catholic high school. Two colleges and two universities are located within minutes of the village.

The community is supportive of education and often passes referenda, the most recent being a bond referendum for \$10 million for a new junior high school, and also a bond referendum for an addition to the high school.

Regional and National Context of Problem

Since the beginning of the educational system, it has been a belief that the classroom was teacher-centered. With the 21st Century quickly approaching, some believe that the focus of the classroom needs to change to student-centered.

Today's classroom, in which children are not challenged to be responsible for their own learning, looks very much like the classroom in which the teacher took sole responsibility for the learning of the student. Today's students need to know how to manage information, not memorize facts. Processing skills and working in a cooperative manner are skills that students need to know to help manage information (Cameron, 1992).

If we expect students to be responsible, we must provide them with the opportunity to learn and practice responsibility (McCabe & Rhoades, 1992). Students that spend more time working in silence at their desks, filling out workbooks, copying notes from the blackboard or teacher's lectures may not be learning to take responsibility for their own learning. They are passive learners.

"The success and well being of individuals and of our nation rest upon the school system's ability to produce responsible thinking adults" (McCabe & Rhoades, 1992, p. 210).

White, Blythe & Gardner (1992) stated the difficulty is that all students do not know they can take responsibility for their learning by drawing on their own strengths and interests, and not all students know how.

Teaching students to be responsible needs to be included in the total school curriculum.. However, we cannot force a person to be responsible. Teachers can develop responsibility in students by using the following methods: 1) use direct instruction to teach students the rules or standards to be observed, 2) use verbal and nonverbal cues that model being responsible, and 3) provide an environment that encourages responsible

action (Chamberlin & Chambers, 1994). A classroom that inspires students to voice their views and perspectives may encourage responsibility for learning.

Teaching a student to be responsible is an important life skill; however, it needs to be organized and well-planned. Planning time and adequate funding for materials and resources to supplement programs that are already in place must be considered (Hootstein, 1994).

The teachers of the 21st Century will be required to help students become critical and creative thinkers. As we look into the future, we realize that students' survival in the next century will require advanced thinking skills, the ability to solve problems and to work cooperatively with others.

Chapter 2

PROBLEM EVIDENCE AND PROBABLE CAUSE

Problem Evidence

In order to document the problem of students not taking sufficient responsibility for their own learning, anecdotal records consisting of teacher discussions, interviews of randomly selected students (Appendix A), and a survey of students' study habits (Appendix B) were recorded over a period of five months. The researchers recorded the students' responses to the survey which are recorded in Tables 1-5. The interview results are recorded in narrative form. The survey and interview results reinforced the researchers' observation regarding students' lack of responsibility to their own learning.

Of the 120 students in the five classes, 97 were involved in the survey process over the five month period during months one, three, and five. A summary of the results are presented in Tables 1 - 5. Of the 120 students in the five classes of the study, 50 were involved in the interview during months one, three, and five of the five month study. A summary of the results of the interview is presented in Narrative of Interview Results.

Table 1
Evening Preparation Time
 September 1995

Times	September	November	January
0 - 5 Minutes	19%		
16 - 30 Minutes	31%		
31 - 60 Minutes	36%		
61+ Minutes	14%		

These results are based on question 1 of the survey.

Prior to the intervention, each student participating in this study was asked to complete a survey.

Table 2

Individuals Who Students Question About Schoolwork

September 1995

Sources	September	November	January
No one	0%		
Teacher	54%		
Another Student	40%		
Other	6%		

These results are based on question 2 of the survey.

Prior to the intervention, each student participating in this study was asked to complete a survey.

Table 3

Individuals Who Students Question About Homework

September 1995

Sources	September	November	January
No one	3%		
Classmates	17%		
Parent	57%		
Family Member	21%		
Other	2%		

These results are based on question 3 of the survey.

Prior to the intervention, each student participating in this study was asked to complete a survey.

Table 4

Individuals Who Help Students with Their Schoolwork

September 1995

Sources	September	November	January
Teacher	8%		
Friends	7%		
Parent	31%		
Self	41%		
Family Member	13%		

These results are based on question 4 of the survey.

Prior to the intervention, each student participating in this study was asked to complete a survey.

Table 5

Individuals Who Check Students' Work Before the Teacher

September 1995

Source	September	November	January
Self	41%		
Parents	45%		
Classmates	1%		
Other Family Members	4%		
No one	9%		

These results are based on question 5 of the survey.

Prior to the intervention, each student participating in this study was asked to complete a survey.

Narrative of Interview Results

The results of the initial survey, given in September, indicated that students enjoyed a variety of leisure and social activities. Among these were all types of individual and group sports, socializing with friends, watching television, reading, and playing video games.

Classroom activities that students enjoyed in the past, experiments and projects, art activities (hands-on), cooperative group work, and academic review games were among those most mentioned. The children enjoyed these activities because they were fun, interesting, and made it easier to formulate ideas.

Less homework; an increase in cooperative group work; more projects, activities, and experiments; and allowing the children more opportunities to make choices would make school more interesting.

The amount of time most students spent concentrating on their classwork varied between 25 percent and 100 percent of the time. To hold the children's interest for longer periods of time, some suggestions that were given by the students included: covering interesting topics, using a variety of activities, more cooperative group work, experiments, and videos.

Some turn offs that the students mentioned about school were homework, not being allowed enough class time to begin work, teachers lecturing, unrelated topics, and not understanding material and tests.

The strategies that the children used to solve problems included a variety of methods. They asked teachers, parents, and friends for help. Students also reviewed and

rethought the problem, researched possible solutions, and narrowed down choices by using common sense.

Probable Causes

There are several possible reasons for the problem of students' lack of responsibility for their own learning. Analysis of the probable cause data indicates that the problem may be related to students' lack of higher-order thinking skills, lack of the ability to transfer problem-solving strategies from one subject area to another, and self-motivation. An analysis of the data indicated that the five classes lacked the ability to think critically on assignments and during testing. When the three-story intellect house is not utilized in the classroom, students cannot be expected to automatically know how to use the different levels (Appendix C).

Lack of the ability to transfer problem-solving strategies from one subject area to another may be another contributing factor. Students need to realize that the skills they learn in one class can be transferred to other areas of life.

Students lack self-motivation. Students may not have the desire to attain knowledge in an area they deem irrelevant to their lives or difficult to master.

The literature suggests several underlying causes for students' lack of responsibility for their own learning. Bloom and associates (1956) provided a useful list of cognitive educational objectives. The taxonomy of objectives falls into two broad classes: those that involve remembering and those that require thinking. The higher levels of Bloom's taxonomy require the learners to apply their knowledge and to take more initiative for learning (Appendix D). Fleming and Chambers (1980) analyzed more

than 8,800 test questions. Approximately 80 percent dealt only with recalling facts - the lowest level in Bloom's taxonomy. Fogarty & Bellanca (1991) reported that teachers themselves are usually not formally trained in thinking skills, so they cannot easily teach the skills of thinking to their students. This is why some students lack responsibility in learning and cannot be expected to automatically know how to use the different levels.

Goodlad (1985) suggests that most classroom questions require only factual responses, and students are not involved in thought provoking questions. Students are not being challenged to be responsible learners nor to formulate their own ideas or opinions. A responsible learner is one who is actively engaged in the thinking process and takes initiative for daily tasks such as completing assignments, projects, and activities.

Durkin (1978) says that teachers tend to neglect all but a few teaching strategies. Teachers who continue to follow the same teaching style on a daily basis do not challenge students to take responsibility for learning and thinking critically.

Fogarty & Bellanca (1993) cite that students lack the ability to use and follow problem-solving strategies. This is because they cannot transfer or carry information from one situation and apply it to another. They may miss the connection or be unaware of similar patterns in problems and situations.

There are four main causes reported by Fogarty & Bellanca for the inability of students to transfer learning. The first is that drills and practices are used too often in the classroom instead of metacognitive classwork. Second, the students are asked to recall information 90 percent of the time instead of asking them how they can apply or transfer information. Thirdly, students are given too little time for classroom discussions. If they

had more opportunities for discussion, they would be better able to use problem-solving strategies among themselves. Finally, if the priorities of the curriculum are not consistently followed, the connection or transfer of problem-solving strategies has no special meaning for the student.

Another underlying cause for students not taking responsibility is the lack of intrinsic motivation. When students are given explicit instructions as to what to do on an assignment, they are able to complete a task. However, when the students are left to complete a task on their own, they are more likely not to succeed. Responsibility is a complex concept involving a number of issues such as accountability and control (Anderson & Prawat, 1983).

Many schools follow the Scholastically Dominant Theory of Knowledge, Learning, and Literacy. This theory assumes that the teacher has the fundamental responsibility for student learning (Paul, 1988). This situation frustrates students because they lack the control they need to be responsible (Woods, 1979 & Everhart, 1984).

A study conducted by Bacon in 1993 found that students do not view responsibility as something that is intrinsically motivated but something that others expect from them. The students in this study did not see school as offering them either control or challenge. Woods (1979) and Everhart (1984) found that students who lack control often do only what the teacher specifically ask them to do.

Another study carried out by Ludwig (1992) came up with the results that when someone else is in control, personal growth diminishes. In this study undergraduate students were surveyed, and it was found that their greatest growth was in the areas of meeting new people, making decisions independently, leadership, and social confidence.

In all these areas, students were in control of their learning. The areas of least growth were changing views, writing, and mathematical ability. In all of these areas, the instructor was in control of what was learned.

In the past teachers were taught that they were responsible for students' learning, therefore, producing students who were content with minimal effort. In fact, some students gain the control they desire by choosing not to do their work at all.

A review of probable causes gathered from the sites and from the literature presented evidence that lack of higher-order thinking skills, lack of ability to transfer learning, and lack of self-motivation contributed to the problem of students not taking responsibility for their own learning. Not processing higher-order thinking skills resulted in students being unable to analyze information. The inability to transfer learning from one subject area to another resulted in the students being unable to connect the material learned in school to their every day lives. Observation by the researchers of students who are not self-motivated demonstrated poor preparation, minimal effort, and lack of interest.

Chapter 3

THE SOLUTION STRATEGY

Review of the Literature

After reviewing the literature on solution strategies, researchers and experts suggested different solution strategies for the problem of students not taking sufficient responsibility for their learning. The strategies suggested were using higher-order thinking skills, teaching problem-solving techniques which tend to increase transfer of learning, and by encouraging motivation to learn.

According to Shrenko (1994), teachers in learner-centered schools use proven instructional practices, such as modeling and asking higher-order questions. These can effectively enhance students' knowledge and internalization of instruction.

Teachers must consciously bring higher-order thinking and reasoning to lessons so students learn to think and perform at higher levels reports Lazear (1991). By structuring each lesson to ensure individual learning, students will realize that the key to their own educational success is using higher-order thinking skills.

Costa (1991) believes that teachers who use higher-order thinking strategies become the underlying inspiration for students to become passionate observers and insatiable questioners. These teachers may be the ones who develop in others a compassionate attitude and curiosity with which they go wondering through life -- a prerequisite for higher-order thinking.

McTighe and Lyman (1988) suggest that the ability to organize ideas is fundamental

to thinking. They recommend the use of graphic displays and cognitive maps to develop organizational skills and higher-order thinking. Also, cognitive organizers help to generate and organize ideas (Appendix E).

According to Johnson and Johnson (1989), cooperative learning provides a structure for intensifying academic achievement, fostering higher-order thinking, and extending problem-solving abilities for all learners. Educators find that students are much more willing to attempt problem-solving tasks when they work in groups rather than by themselves.

Mills-Courts and Amiran (1991) suggest the use of portfolios as a wonderful, decision making tool for the student. Portfolios not only foster organizational skills, but also foster higher-order tasks, such as predicting, prioritizing, and ranking. Portfolio development is an ongoing process that provides ample opportunity for student-directed and student-initiated thinking.

Using higher-order thinking skills was only one of several strategies suggested by the literature to solve the stated problem. The second solution strategy was to implement problem-solving techniques.

Fogarty and Bellanca (1993) suggest using "partnered pairs" in order to help students become problem solving thinkers. In "partnered pairs" the students take turns repeating the steps they use in solving a problem. Students are given the opportunity to track their thinking by verbal practices.

The Plus, Minus, Interesting Method (PMI) is a strategy of de Bono (1976) which teaches students to look at the different angles of a situation, providing the basis for good

planning and strategic action (Appendix F). This procedure enables the student to take a good look at both sides of an issue.

Identifying and solving a problem using an orderly thought process also structures students into higher-level thinking. Project based learning activities as described by Marzano and Arrendondo (1986) challenge students to do complex thinking. Students become aware of their own thinking prior to, during, and after a learning project. These are vital skills that are required in becoming effective problem solvers.

Prentice (1994) states that students need to learn to transfer learning from one discipline to another. By applying their learning from one problem-solving setting to another within both academic and real-world situations, students gain knowledge in areas beyond the subject at hand (Appendix G). The thinking classroom places an emphasis on problem-solving practices.

The third strategy considered for improving students' responsibility for learning involves motivation. Motivation according to Borich (cited in Farris, 1990) is the energizing direction that drives a learner's attention, emotions, and activities. It is the belief that a goal is attainable.

Ellis and Lenn (1995) suggest that educators be certain that the content of an assignment be worth doing. Active involvement and the students being asked for their input are also important. We should ensure that our curriculum arouses intense curiosity.

Strong, Silver, and Robinson (1995) feel that a motivated student exhibits three characteristics. First, the students are attracted to their work. Second, the students persist in their work despite challenges, and finally, students take visible delight in

accomplishing their work. Students who are engaged in their work are energized by four goals: success, curiosity, originality, and satisfying relationships.

In reviewing the various solution strategies the literature suggested using higher-order thinking skills, teaching problem solving techniques, and encouraging motivation to learn. Many researchers found that these techniques had a positive effect on students and encouraged them to take responsibility for learning.

Project Outcomes and Solution Components

After reviewing the literature on solution strategies, the solutions the writers chose were to use the three-story intellect, graphic organizers, and cooperative learning to teach higher-order thinking skills. In the area of problem solving, the strategies chosen were the use of cooperative learning, portfolios, the PMI method, and transfer skills. The third possible solution researched was motivation. The strategy selected for use was content relevancy to students' lives. Using these strategies will enhance the development of students taking responsibility for their learning.

Project Objectives

As a result of an increased use of higher-order thinking skills, problem-solving strategies, and motivation enhancers during the period of September 1995 through January 1996, the targeted 4th, 5th, 6th and 8th grade students at the two elementary schools will increase responsibility for their own learning, as measured by surveys, interviews, and anecdotal records.

In order to accomplish the terminal objective the following strategic procedures are proposed:

1. students will use the three-story intellect.
2. students will use graphic organizers.
3. students will engage in cooperative learning lessons.
4. students will assemble portfolios.
5. students will use the PMI Method.
6. students will be taught how to use transfer skills.
7. students will be given opportunities to make some decisions about content relevancy.

Action Plan for the Intervention

- I. Three Story Intellect
 - A. Students will engage in building their own three-story intellect questions.
 - B. Teachers will construct lessons that will provide opportunity to use the three-story intellect.
- II. Graphic Organizers
 - A. Students will be instructed how to use a variety of graphic organizers.
 - B. Students and teachers will use the Venn Diagram to compare and contrast.
 - C. Students and teachers will use webs to clarify concepts.
 - D. Students and teachers will use mind maps to narrow topics and organize thoughts.
 - E. Students and teachers will use Know, Want to Know, and Learned Chart (KWL) to bridge prior knowledge to new concepts and ideas.
 - F. Students and teachers will use the T-Chart to help clarify concepts and ideas.
- III. Cooperative Learning
 - A. Teachers will introduce and model social skills to students.
 - B. Teachers will assign roles to the members of each cooperative group.
 - C. Students will participate in a variety of cooperative group activities.
 - D. Students will participate in group processing discussions that will reinforce the objectives of the cooperative lesson.
- IV. Portfolios
 - A. Students will choose work that they are proud of to showcase in their portfolio.
 - B. Students will include self-reflection on their chosen selections.
- V. PMI Method
 - A. Students will evaluate concepts, thinking processes, and cooperative interaction.
 - B. Students will investigate and examine the different sides of an issue.
- VI. Transfer
 - A. Teachers will use interdisciplinary approaches to their teaching.
 - B. Teachers will help students make relevant transfer through bridging strategies.
- VII. Content Relevancy
 - A. Students will be given interest inventories.
 - B. Students will be given choices in the means by which they are to complete a task.

Methods of Assessment

In order to assess the effects of the intervention, teacher observations will be implemented throughout the program. Documentation will be recorded in teacher journals and checklists (Appendix H).

The teachers will periodically record anecdotal notes in their journals. The journals will document observations pertaining to the areas of higher-order thinking skills, problem-solving strategies, and motivation. These records will provide an opportunity to revisit initial perceptions and to compare any changes in those perceptions.

The checklist was devised by the writers to document responsible behavior in the classroom. The purpose of the checklist is to assess preparation for class and completed in-class assignments and homework. The writers will check for signs of students being engaged in learning by noting student alertness, participation, and demonstration of understanding. These behaviors will be observed during thirty cooperative learning activities. The checklist will ascertain whether students are complying with assigned roles during cooperative tasks. It will also log how frequently a student seeks a variety of sources to get information.

Another method of assessment will be the surveys conducted by the researchers. The surveys will be distributed during the first, third, and fifth months of the study. The results will be tallied and compared to one another.

The final assessment that the writers will use in the intervention will be to interview ten randomly selected students. The interviews will be conducted during the first, third, and fifth months. This information will then be recorded.

Chapter 4

PROJECT RESULTS

Historical Description of Intervention

The objective of this project was to improve the attitude of students in the area of independent learning resulting in their taking more responsibility for their own learning. In order to accomplish the objective, the following strategies were applied: three-story intellect, graphic organizers, cooperative learning, portfolios, PMI method, transfer of learning, and interest inventories.

In the first strategy used, the students engaged in building three-story intellect questions while the teachers constructed lessons that provided opportunities for the students to use this higher-order thinking mechanism. Also, teacher-made tests incorporated the verbiage of the three-story intellect as a means of authentic assessment.

Graphic organizers were the second strategy used by the students and teachers to enhance skills learned. These skills included compare/contrast, clarification of concepts and ideas, and organization of thoughts. Among the graphic organizers implemented were webs, Venn diagrams, mind maps, KWLs, and T-Charts. These methods were utilized to bridge prior knowledge to new concepts and ideas (Appendix E).

The third strategy used was cooperative learning. The teachers introduced and modeled social skills to the students. After assigning roles to the members of each cooperative group, students participated in a variety of group activities. Group

processing discussions were held after each activity to reinforce the objective of the cooperative lesson (Appendix I).

Portfolios were the fourth strategy used. Students gathered samples of work that they felt proud of and showcased it in their portfolios. The students were given the opportunity to choose entries from among the following: poetry, letters, short stories, graphic organizers, book reviews, and special projects. Included with each entry were self-reflections completed by the students (Appendix J).

The PMI method of evaluation was the fifth strategy used. Students evaluated concepts, thinking processes, and cooperative interaction with one another. They also examined the different sides of an issue by reflecting on the positive, negative, and interesting ideas of each experience.

The sixth strategy implemented was transfer. Teachers helped to make relevant transfer by utilizing bridging techniques to help students associate prior knowledge to new concepts and ideas. This was accomplished by teachers taking knowledge, skills, and attitudes that were learned in one discipline and applying them to other learning situations.

The final strategy used was interest inventories. These were periodically given to the students to determine the areas of study the students preferred. For example, students were allowed to choose among oral or written presentations and artistic means of expression according to their gifts and talents. Traditional testing was another option; however, more cases than not, the alternative choices were chosen over traditional testing

Presentation and Analysis Results

One way the intervention was assessed was weekly teacher observations, which were recorded in the form of anecdotal notes and journals. These recordings in the form of a checklist showed whether the students were prepared for class, whether homework and in-class assignments were completed, whether students were engaged in learning, whether assigned roles were followed in group work, and whether students used a variety of sources to obtain information.

Bimonthly surveys were a second way this intervention was assessed. Through the use of these surveys, which were given during the period of September 1995 through January 1996, the teachers were able to assess the amount of responsibility students took in preparing for the next day's lessons and also identify the individuals who assisted them in their studies. A summary of results is presented in Tables 6 - 10.

Another way the intervention was assessed was through the use of bimonthly interviews. The interviews were conducted by each teacher during the first, third, and fifth months. Interviews were given to the same ten randomly selected students throughout the study. A summary of the results is presented in Narrative of Interview Results.

A final narrative includes the findings of teacher observations, anecdotal notes/journals, and checklists.

Table 6
Comparisons of Evening Preparation Time
 September 1995

Times	September	November	January
0 - 5 Minutes	19%	25%	27%
16 - 30 Minutes	31%	39%	30%
31 - 60 Minutes	36%	24%	29%
61+ Minutes	14%	12%	14%

The results are based on question 1 of the survey.

During the period of intervention, the amount of time the students prepared for school each evening 0-5 minutes increased by 8 percent, while the amount of time they prepared 31-60 minutes decreased by 7 percent. Preparation time for 16-30 minutes and 61+ minutes changed slightly. However, the amount of study time for the majority of the students averaged between 16-60 minutes.

Table 7

Comparisons of Individuals Who Students Question About Schoolwork

September 1995

Sources	September	November	January
No one	0%	3%	3%
Teacher	54%	52%	54%
Another Student	40%	43%	42%
Other	6%	2%	1%

The results are based on question 2 of the survey.

During the period of intervention, students continued to request aid from their teachers and/or classmates 96 percent of the time when they experienced difficulty in their schoolwork or had questions concerning their learning.

Table 8
Comparisons of Individuals Who Students Question About Homework
 September 1995

Sources	September	November	January
No one	3%	2%	4%
Classmates	17%	16%	24%
Parent	57%	48%	45%
Family Member	21%	33%	26%
Other	2%	1%	1%

The results are based on question 3 of the survey.

During the period of intervention, students began asking their classmates questions about their homework 7 percent more of the time when a problem arose. However, there was a 12 percent decrease in the number of students who approached their parents for assistance.

Table 9
Comparisons of Individuals Who Help Students with Their Schoolwork

September 1995

Sources	September	November	January
Teacher	8%	10%	8%
Friends	7%	10%	20%
Parent	31%	30%	33%
Self	41%	38%	28%
Family Member	13%	12%	11%

The results are based on question 4 of the survey.

During the period of intervention, the percentage of students asking friends for assistance on schoolwork increased by 13 percent, while the percentage of students relying on themselves decreased 13 percent.

Table 10
Comparisons of Individuals Who Check Students' Work Before the Teacher

September 1995

Source	September	November	January
Self	41%	35%	30%
Parents	45%	37%	34%
Classmates	1%	1%	4%
Other Family Members	4%	8%	6%
No one	9%	19%	26%

The results are based on question 5 of the survey.

During the period of intervention, the percentage of students who checked their own work decreased by 14 percent, and the percentage of students whose parents checked their work decreased by 11 percent. The percentage of students who did not ask anyone to check their work increased by 17 percent.

Narrative of Interview Results

Upon reviewing the November and January data, the researchers found that when the children are not in school they still enjoyed leisure and social activities with groups. These activities included participating in sports, such as basketball, football, soccer, and volleyball, and being with friends by going to the mall, talking on the telephone, going on sleepovers. The researchers also noted an increase in individual activities such as watching television, reading, and writing. This increase could have been due to the seasonal changes of the weather.

The classroom activities that the children enjoy remained the same. These activities included working in cooperative groups, hands-on activities, and academic games. Hands-on activities included science experiments, math manipulatives, art projects, models, and mobiles. The academic games the students enjoyed the most were Jeopardy, Mind Quest, Typewriter Spelling, and Spelling and Math Bees.

During November and January, the students found that school was more interesting to them when they were given a variety of activities and experiments. These activities included skits, role playing, oral presentations, jigsawing portions of lessons, science projects, and drawing. They also enjoyed concepts and projects more relevant to life. These included writing letters to sport figures, outdoor education programs, and field trips.

The data from the interviews regarding the time students spent concentrating on class work ranged from 20 percent to 100 percent of the time. The activities that held their interest included a variety of topics pertaining to science and history trivia and personal stories and learning new and unusual facts.

Homework continued to turn off students to school. The students indicated that an enthusiastic presentation held more interest. They also felt that the pressures of achieving good grades placed upon them by their parents were drawbacks in their educational development.

The researchers found that the strategies by which students solved learning problems included taking the initiative to research the answer before asking others for help. The students also used mnemonic aides and flash cards to help them remember information.

Narrative of Teacher Observations, Anecdotal Notes/Journals, and Checklists

Other methods of assessment throughout the intervention were teacher observations, anecdotal notes/journals, and checklists. These were used to measure increases in students' accountability for learning.

One specific example that showed an increase in students' responsibility for learning was the students' initiative to use higher order questioning verbiage. At the start of the intervention, students were given the three-story intellect sheet and were required to create questions that used verbiage of all three levels of the three-story intellect. As the study progressed, the sheet was taken away from the students, and they still incorporated the verbiage in their questions.

In another intervention, it was observed that graphic organizers became a useful tool in helping the students write essays more independently. In the beginning of the intervention, students demonstrated difficulties in organizing their thoughts in writing essays. As graphic organizers were introduced and practiced, the students became more

organized in the writing process. The graphic organizers required the students to brainstorm and formulate ideas prior to beginning the eventual writing of their essays. Students developed a topic sentence, preview statement, three supporting details and elaborated upon them, and a conclusion. It was observed that in many cases students became better writers as a result, especially in the cases of students who had difficulties in writing in the past.

Cooperative learning was another area in which students' accountability was improved. As the study progressed, students became more familiar with individual role assignments and social skills. The more students practiced the cooperative roles and skills, the more successful the lessons became. It was observed in many cooperative lessons toward the end of the intervention that the more responsibility the children had for the end product, the more enthusiasm they brought to the group. In one specific cooperative science lesson, the students were given a three day human skeleton project to complete. The students were assigned roles, jigsawed the chapter, decided on their means of presentation, and presented their projects to the entire class.

Another area in which students' ownership was demonstrated was in portfolios. This was shown in a variety of subject areas but specifically in the area of language arts. It was noted that students chose a variety of artifacts that they were proud of. These included poems, samples of their writing, mobiles, book reports, tests, graphic organizers, and short stories. Students were allowed to make their own choices. This resulted in an increase in ownership and responsibility.

Throughout the study, students were required to evaluate themselves and the work they completed. This was accomplished through the use of P.M.I. charts. In the

beginning of the intervention, students were apprehensive to evaluate themselves honestly. This was due to their anxiety over the negative reactions of the teacher and group members. As the children became more accustomed to this method of evaluation, it was noted that the students more openly evaluated themselves. It was also noted that students were more accurate in their diagnosis of strengths and weaknesses, and they were more able to expand on their strengths and improve on their weaknesses. One particular group of students was having difficulty in completing projects. Through the use of self-evaluation, the students in this group decided to better organize their time and the methods they used to complete their projects.

It was the goal of the researchers to establish transfer problem solving strategies across the curriculum. At the end of the intervention, it was evident that students demonstrated a transfer of problem solving skills into all subject areas. Teachers who were not associated with the study reported to the researchers that students were asking if they could use graphic organizers to complete tasks that had been assigned to them. In one specific case, students were given the assignment of comparing and contrasting two historical characters. The students asked the teacher if they could use a Venn diagram to show the similarities and differences among the characters. It was evident to the researchers that a transfer had been made across the curriculum.

It was important to the researchers to discover the areas in which students were interested. It was also a goal to allow students choices which would increase students' responsibility for learning. The researchers found that through the use of interest inventories which were completed by students and by allowing choices, it was easy for students to decide a means by which to complete the assignment. The choices the

students made addressed their strengths and talents. Examples of this included the artistic child choosing to express himself/herself through murals, cartoons, and illustrations; the kinesthetic students choosing to complete a task through the use of dramatization, role playing, or projects; and other learners choices of graphic organizers, musical expression, and reflective journals.

Conclusions and Recommendations

Based on the presentation and the analysis of the data, the intervention strategies that the researchers employed were effective in increasing the students' responsibility for learning. The researchers noted that the students were more accountable for their academic progress. By using PMI charts in the assessment of their cooperative group activities and portfolios the children became more adept in their self-evaluation. After being introduced to graphic organizers and the three-story intellect the students were able to transfer their skills to other disciplines of education. Throughout the intervention, students were allowed the freedom to choose different ways of completing projects and assignments according to what interested them as an individual.

The researchers observed that students began to internalize components of the three-story intellect. By the end of the intervention students were able to apply these three-story intellect questions without prompting. Students were able to give more thought when formulating questions and answers. This was observed in class discussions and written responses.

It is the researchers' observation that after instruction in the proper use of graphic organizers the students were able to use and expand on these tools. These devices aided

in a wide variety of activities including preparation of writing, clarifying concepts, being able to see likenesses and differences , and prioritizing. The use of graphic organizers also allowed children to express themselves creatively. It was further noted by the researchers that when the students were given an assignment some developed graphic organizers without previously being instructed by the teacher to do so.

In the researchers' observation of the cooperative groups it was found that when teachers modeled social skills and assigned roles the students stayed on task and were more responsible in completing the assignment. It was evident in classroom observation that children who worked in cooperative groups were enthusiastic, which resulted in better quality projects and assignments. Through the consistency of group processing after every cooperative activity the students became more willing to share and reinforce what they had learned.

It was the initial intent of the researchers to increase student responsibility by allowing them independence in choosing which samples of their work to include in their portfolios. Upon reflection, the researchers agreed that in order to achieve a successful portfolio, the teacher and student should conference and agree on their selections. Students are still given the opportunity to make the final decision which entries they feel belong since this challenges them as thinkers.

It was the researchers' observation that the use of portfolios with self-reflection encouraged children to think analytically about their own writing. They learned to make quality choices based on their personal preference.

Other evidence of students demonstrating an increase in responsibility was through the many uses of the PMI. Through the PMI method, the students were able to

assess strengths and weaknesses of how they related in group work and develop strategies to improve weak areas. Another use of the PMI was as a review tactic. Students were asked what was positive, negative, and interesting about a previous lesson. At the end of classes, students completed PMI charts. As the students became more familiar with these charts, their responses were more in depth. The students also became more aware of the focus of the assignment. Through the uses of PMI charts, students were given the responsibility to choose what was positive, negative, and interesting to them as individuals which made them more accountable for their learning.

The researchers and other staff members noted that many of the teaching strategies used in the sample groups were transferred across the curriculum. One specific example of this was students choosing to use graphic organizers in other subjects. By doing this, the researchers concluded that the students demonstrated the ability to internalize skills taught and use them in other new and relevant situations.

Through the use of the final intervention, which was content relevancy, the students were allowed choices in the means by which they were to complete a task. The researchers concluded that the students showed increased interest in completing school assignments and activities. This was accredited to students being allowed the freedom of choice in how to respond to a given assignment. By allowing this freedom, the students were given the opportunity to focus in on their dominant intelligence.

In summation, it is the researchers observation that the strategies used were effective but would have been more successful if the students had been introduced to the techniques used in the intervention at the beginning of their formal education and developed and reinforced throughout. Ideally, had this study gone longer then three

months, we feel the results would have been more dramatic. It is also felt that this intervention needs to be on-going, continually reinforced, and extended to all classes of the school.

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Appendix A

Interview

Name _____

Interview Questions

1. What do you like to do when you are not in school?
2. What classroom activity did you enjoy in the past? Why?
3. What would make school more interesting to you?
4. How much of the time do you think you concentrate on classwork?
What holds your interest?
5. What turns you off about school?
6. What strategies do you use to solve a learning problem (task) ?

Appendix B

Survey

Directions: Please circle the best answer. Circle only one.

1. On the average, how much time do you spend each evening preparing for the next day's class?

0-15 minutes 16-30 minutes 31-60 minutes 61+ minutes

2. When you have a question about schoolwork, who do you usually ask?

No one Teacher Another student Other _____
(fill in)

3. If you have a question about homework, who do you usually ask?

No one Classmate Parent Family Member Other _____
(fill in)

4. Who helps you the most with your schoolwork?

Teacher Friends Parent Self Family members

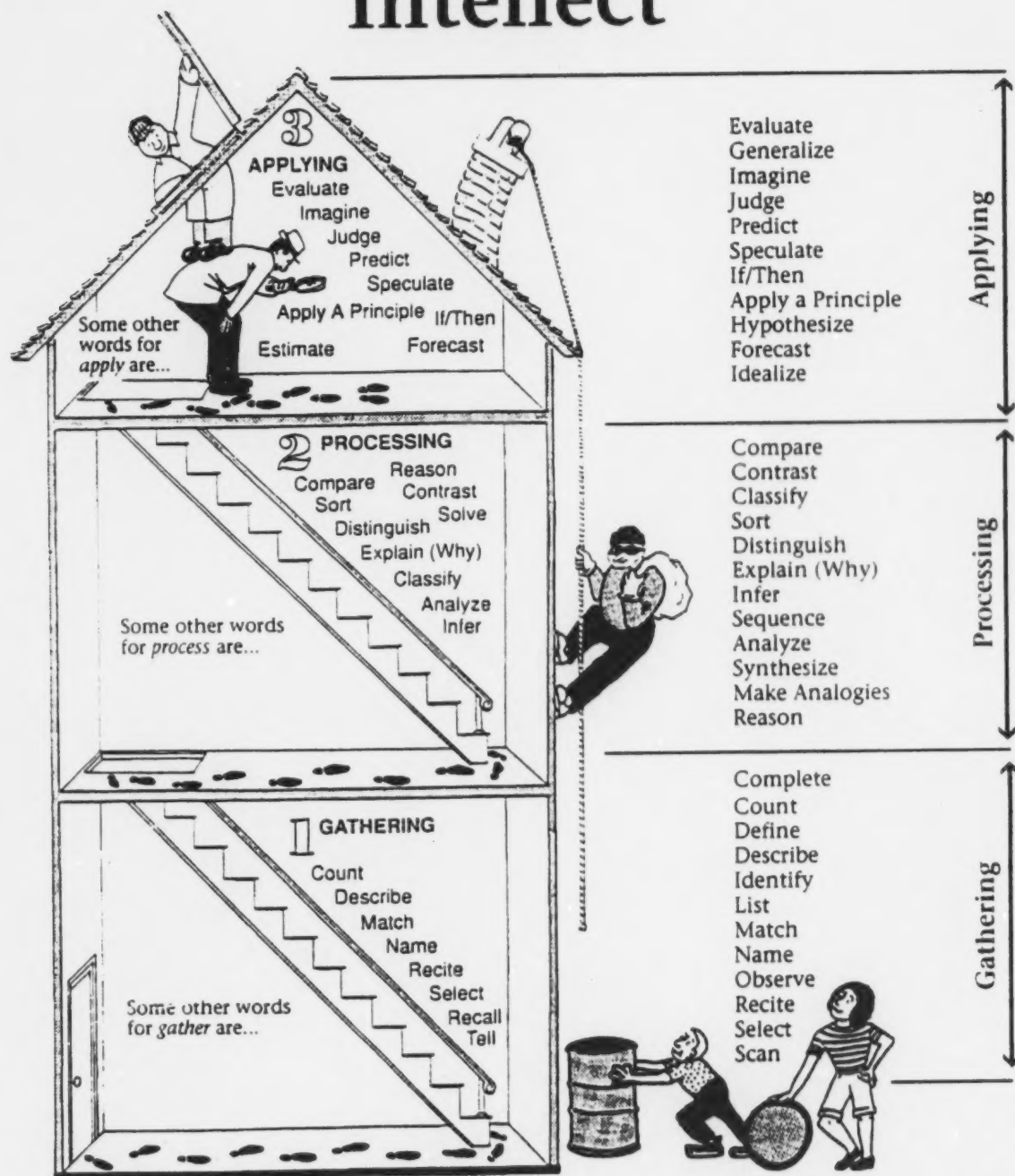
Others _____
(fill in)

5. Who checks your work before it is turned in to the teacher?

Self Parent Classmate Other family member No one

Appendix C
Three-Story Intellect

The Three-Story Intellect



From *Start Them Thinking: A Handbook of Classroom Strategies for the Early Years*, by Robin Fogarty and Kay Opeka, ©1988 by IRI/Skylight Publishing, Inc.

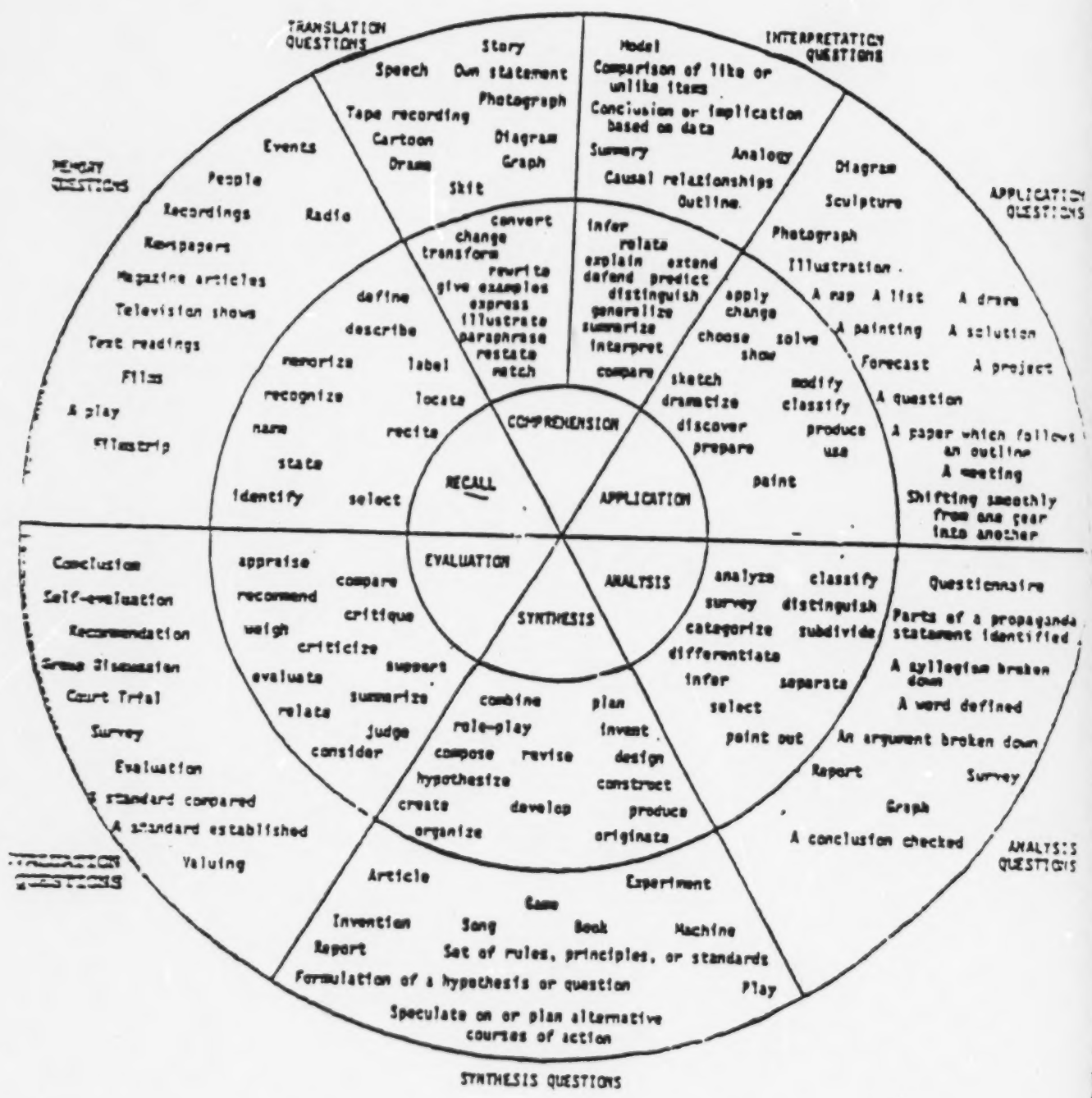
Asking Questions to Learn What I Want to Learn

Question Level	My Goal Is...	Some Key Words to Use Are...
Gathering Knowledge (First-Story Intellect)	to learn simple facts; to collect basic information	who, what, when, where, which, name, list, identify, define, how much, how many, measure, describe
Processing Knowledge (Second-Story Intellect)	to solve problems; to use knowledge in a different context or situation	compare, contrast, explain, solve, what else, instead (of), in addition to, why, my reasons are, next, in review, in conclusion, in summary, this means
Applying Knowledge (Third-Story Intellect)	to explain my opinions; to take a position; to justify an answer; to express new ideas	devise, design, develop, I predict, I believe, in my judgment, it is my opinion (that), it seems, what if

Appendix D

Bloom's Taxonomy

CURRICULUM DEVELOPMENT BASED ON BLOOM'S TAXONOMY



JOHN J. ROSEBERRY
LEWIS DELP

BEST COPY AVAILABLE

Appendix E

Graphic Organizers

GRAPHIC ORGANIZERS - TOOLS FOR STUDENT INTERACTION

Definition: Graphic Organizers provide a visual representation of facts and concepts and their relationship within an organized frame.

Benefits: Graphic Organizers help teachers and students learn and think because they

...represent abstract information in a more concrete form

...depict the relationships among facts and concepts

...aid in organizing ideas

...help in elaborating ideas

...relate new information with prior knowledge

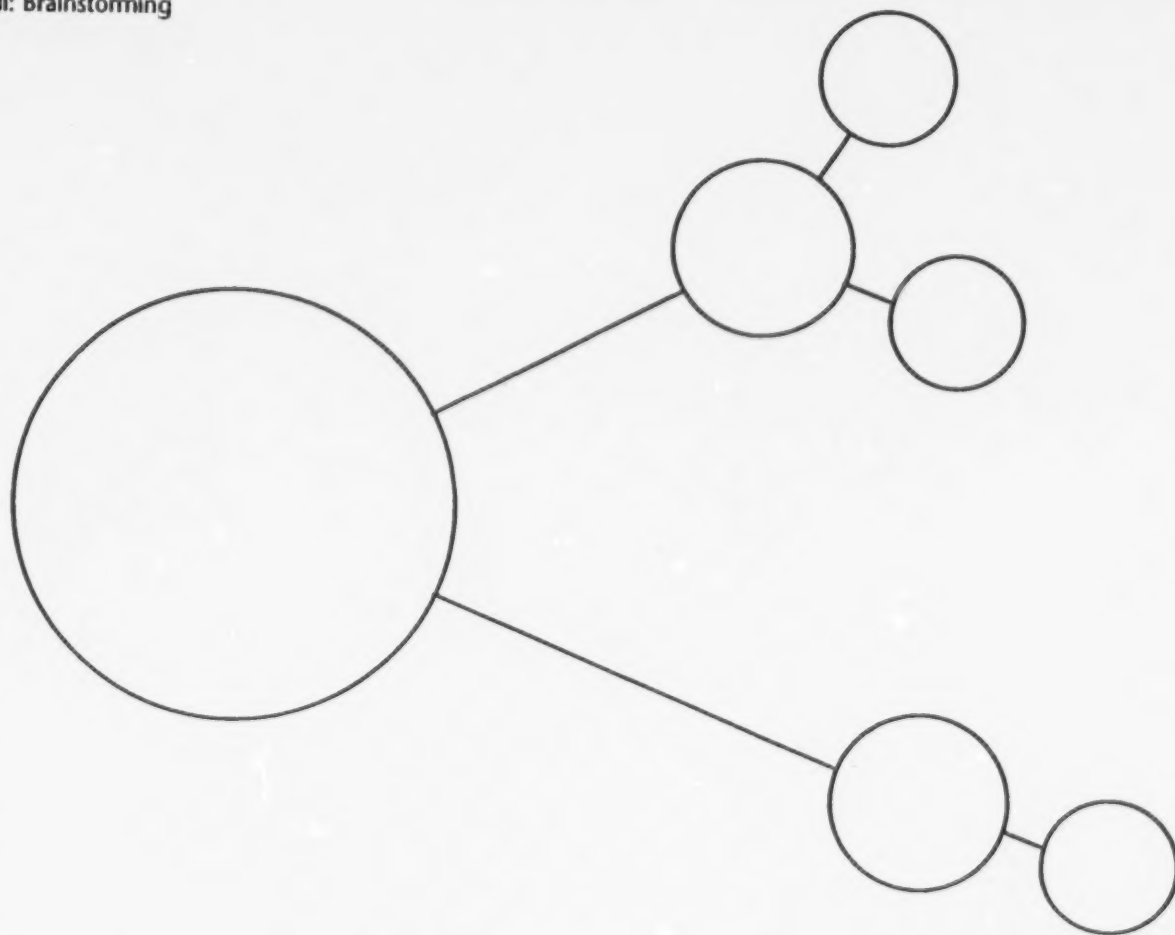
...aid in storing and retrieving information.

STEPS IN TEACHING THE GRAPHIC ORGANIZER

1. Describe the graphic organizer.
2. Introduce a specific graphic organizer.
Ex. The Venn Diagram is used to compare and contrast people, events, ideas.
The form of the Venn Diagram is two overlapping circles.
3. Explain and demonstrate.
4. Let the students apply the organizer to old or new material.
5. Have students share, reflect, and evaluate the use of the graphic organizer.
6. Allow more time for the students to practice.
7. Ask students to select the appropriate organizer to explain their reading assignments.
8. Encourage the students to construct their own organizers.
9. Discuss what specific skill each graphic organizer reinforces (ex. classification, inference).

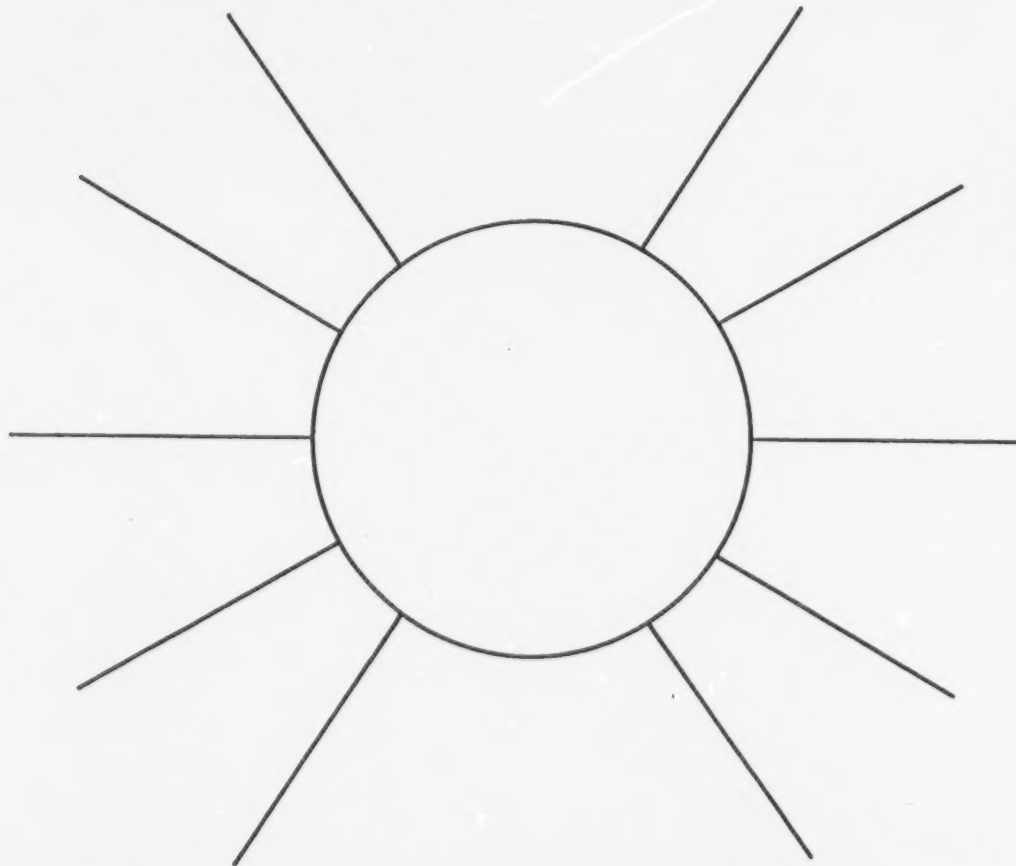
MIND MAP

Thinking Skill: Brainstorming

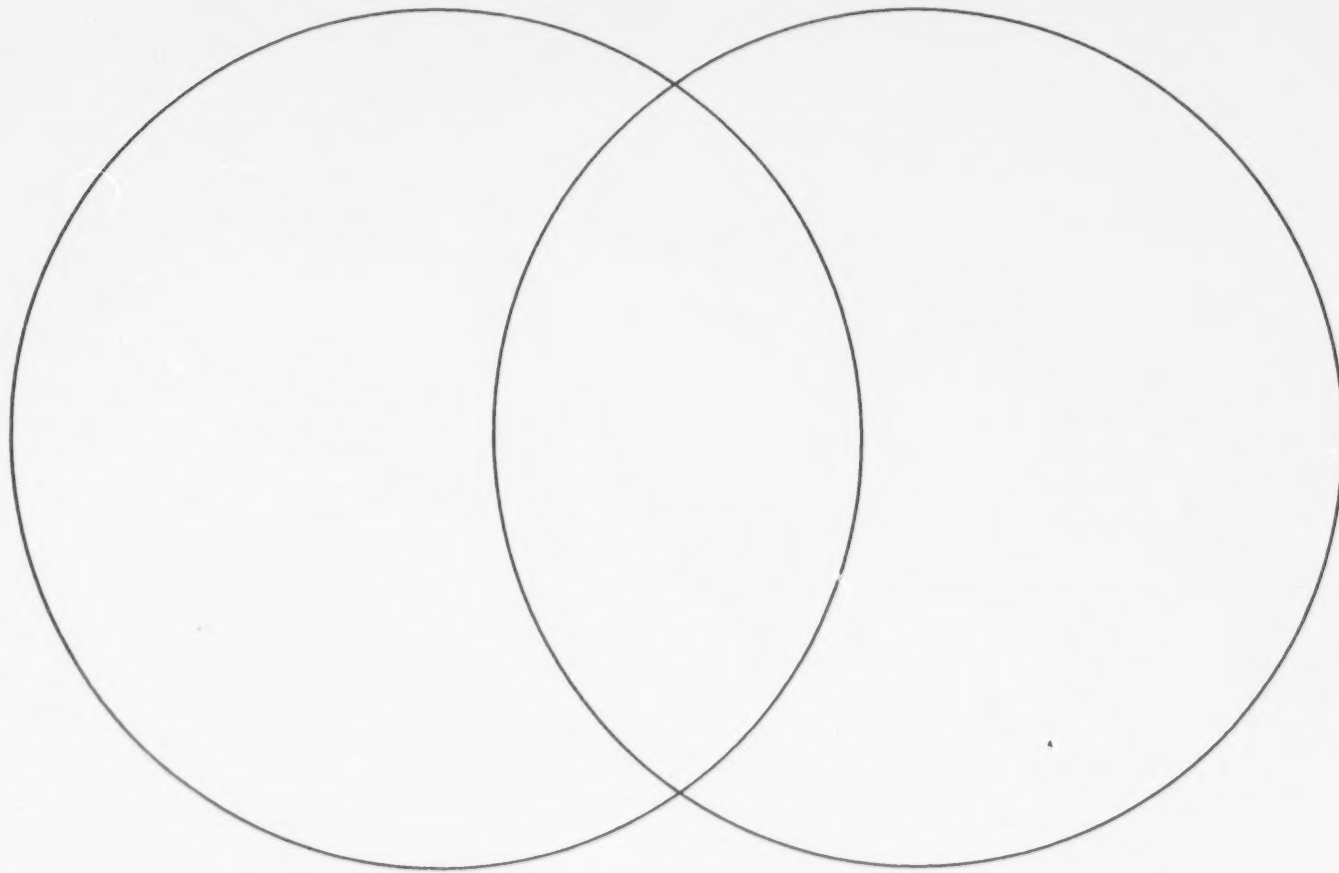


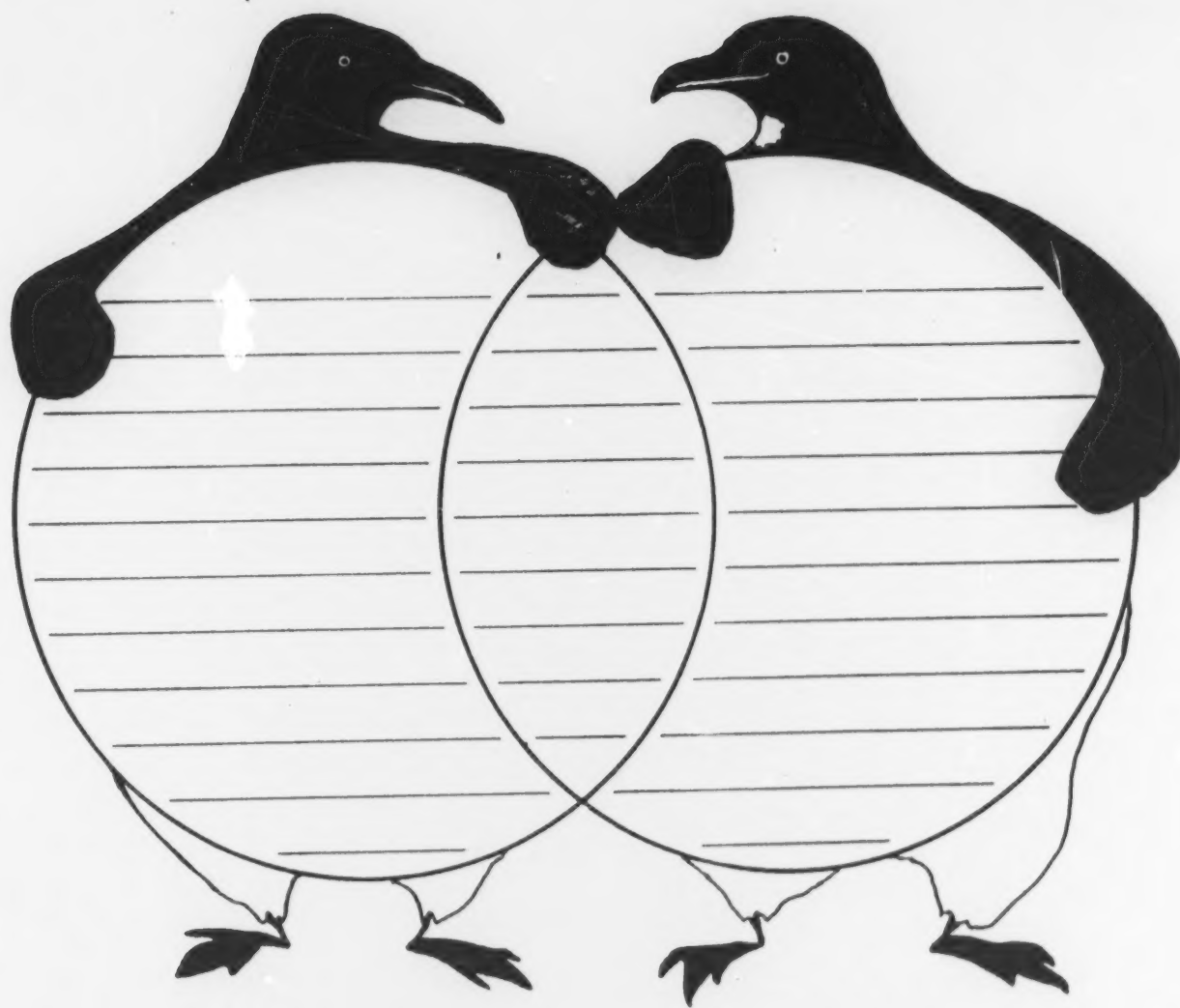
WEB

Thinking Skill: Analyzing Attributes

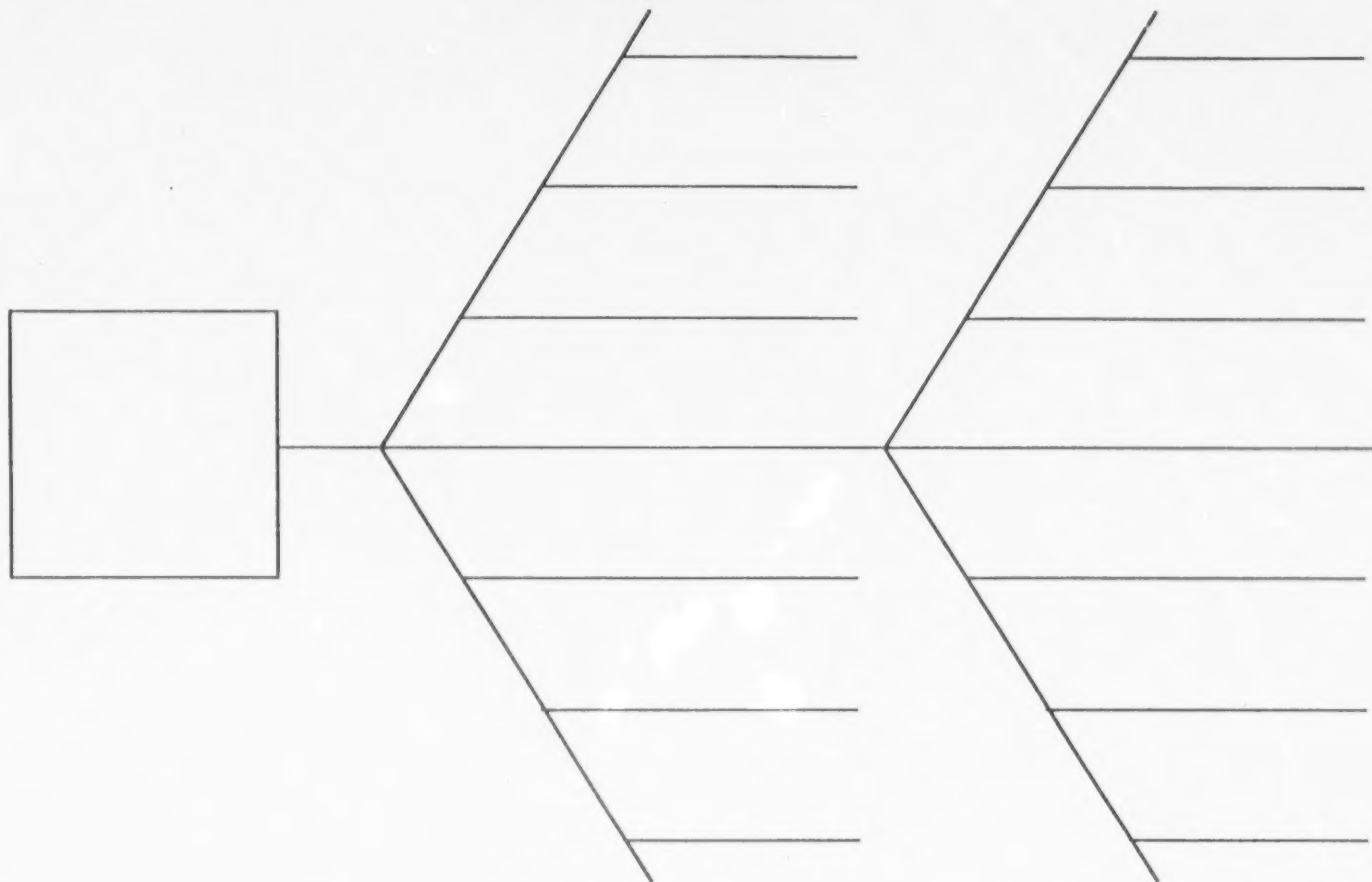


The Venn Diagram





The Fishbone



Mapping A Story Pattern

Text Pattern Map - Episodic Pattern of Action

to link events by character or a common theme



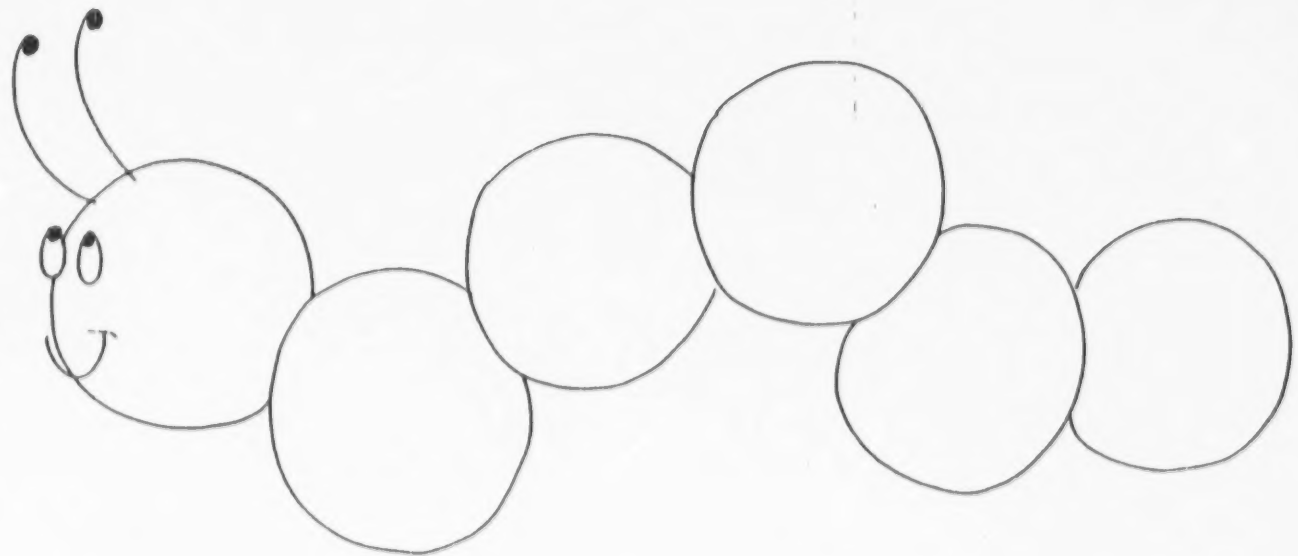
- Read the story.
- What happened in the story?
- List the events.
- Put them in order.
- Write what happened first/second/third... on the map.

Mapping A Story Pattern

Text Patten Map - Episodic Pattern of Action

to link events by character or a common theme

- Read the story.
- What happened first?
- What character appeared first?
- What happened to the character?
- What character did you read about next?
- What happened to that character?
- Etc.
- Is each chapter like a little story?
- What is the connection between the characters?



Story

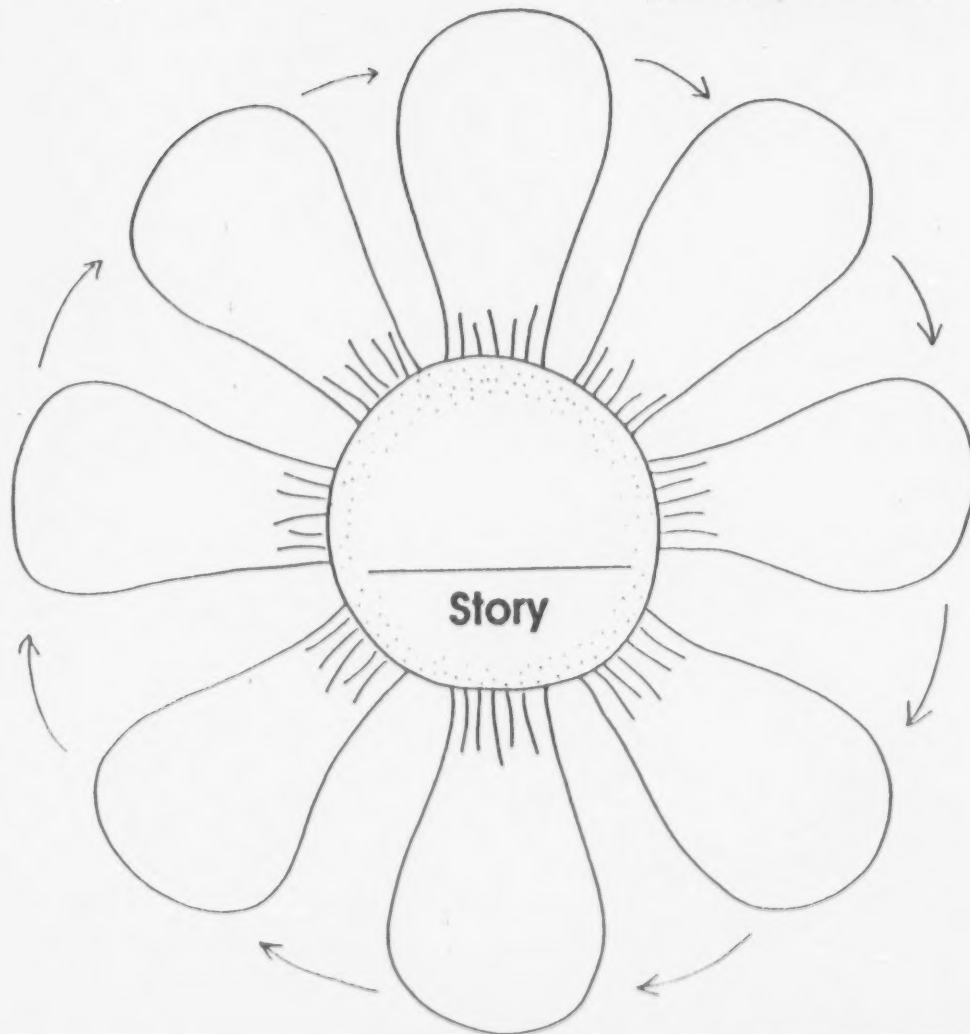
80

Make more caterpillar "bumps" if you need to!

Mapping A Story Pattern

Text Pattern Map - Circle Story Pattern of Action

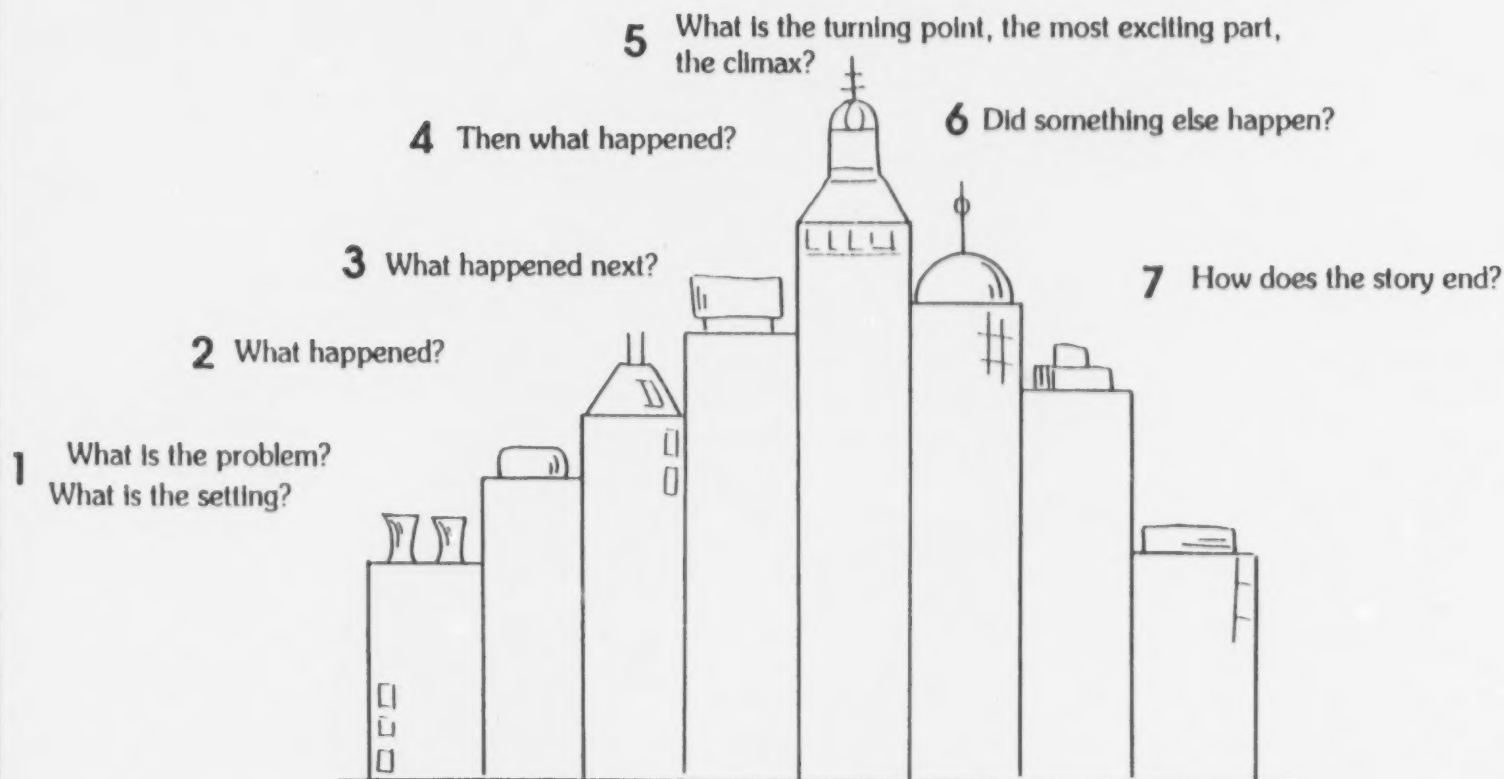
(home-away-from-home)



- Read the story.
- What happened in the story?
- List the events.
- Put them in order.
- Write what happened first/second/third... on the map.
- Did this story begin and end in the same place?

Mapping A Story Pattern

Text Pattern Map - Rising Action in a Story



Story Title _____

T-CHART

Looks Like

Sounds Like

Appendix F

PMI Chart

PMI

Thinking Skill: Evaluating

<i>P+</i>	
<i>M-</i>	
<i>I?</i>	

Appendix G

Transfer

K-W-L

Name of Student:

Date:

Title of Unit:

K What I Know	W What I Want to Know	L What I've Learned

Research Task:

Project:

Due Date:

Reflection:

Signed:

Appendix H

Checklist

OBSERVATION CHECKLIST

Teacher: _____ Class: _____ Date: _____

Target Skills: _____

Ratings:

+ = Frequently

✓ = Sometimes

o = Not yet

NAMES OF STUDENTS							COMMENTS
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							

NAME

Date

Prepared for Class
Homework Complete
IN-CLASS
Assignment Complete
Student engaged
in Learning
Follows Assigned
Role (Group Work)
uses variety of
sources to get info

Observation Checklist for Work Habits

Student _____ Date _____

Frequently Sometimes Not

WORK HABITS:

- *Gets work done on time
- *Asks for help when needed
- *Takes initiative

_____	_____	_____
_____	_____	_____
_____	_____	_____

STUDY SKILLS:

- *Organizes work
- *Take good notes
- *Uses time well

_____	_____	_____
_____	_____	_____
_____	_____	_____

PERSEVERANCE:

- *Shows patience
- *Shows perseverance
- *Checks own work

_____	_____	_____
_____	_____	_____
_____	_____	_____

SOCIAL SKILLS:

- *Works well with others
- *Listens to others
- *Helps others

_____	_____	_____
_____	_____	_____
_____	_____	_____

COMMENTS:

Appendix I
Cooperative Learning

Take Time For Cooperative Learning

- Take time to talk...
...you learn a lot from what you say.
- Take time for a walk...
...behold the marvels about you.
- Take time to play...
...the group that plays together stays together.
- Take time to celebrate...
...celebrate yourself and celebrate one another.
- Take time to share...
...others want to know what you've learned.
- Take time to care...
about yourself, your group, your world.
- Take time to listen...
...you'll be surprised how much you'll hear.
- Take time to question...
...that's the only way you'll find answers.
- Take time to explore...
...see, smell, touch, taste, learn.
- Take time to experiment...
...find out how and why.
- Take time to think...
...about all there is to learn.
- Take time to read...
...an open book is a window to the world.
- Take time to write...
...your thoughts are worth saving.





Reactions To Working In Cooperative Groups



+ What do we like? What grabs us?	- What don't we like? What is negative?	I What puzzles us? What is neither + or -?
Group members:		

Cooperative Learning Roles

Puzzle Strips

Coordinator / Manager	Keeps the group on task.
Reader	Reads directions, problems, and resource materials to group members.
Checker	Checks for group members' comprehension of material.
Communicator	Conveys actions and findings of group to other groups.
Evaluator	Keeps notes on group processing and social skills.
Go-For	Gets materials and equipment and runs errands for group.
Encourager - Praiser	Makes sure all group members have their turns + provides positive feedback to group.
Timekeeper	Keeps track of time allotted for assignments and keeps group on time.
Artist	Illustrates and displays projects.
Secretary / Recorder	Writes down group responses.

RECORDER



"The main points are . . ."

"Should I write . . . ?"

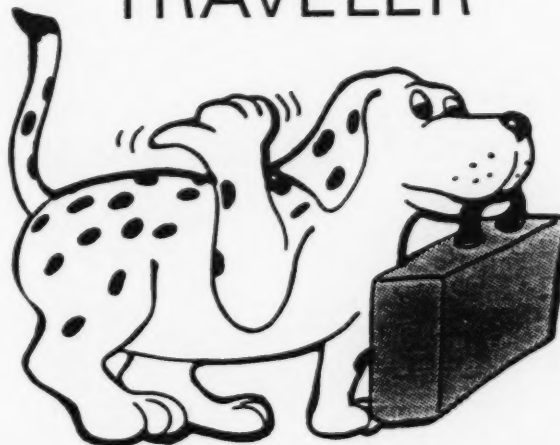
"To summarize . . ."

Photocopy this page
onto heavy paper or
card stock. Cut off
excess along dotted
line and cut in half.

Tools For The Cooperative Classroom

Cut in
half →

TRAVELER



"Can you help us with . . . ?"

"Did your group understand . . . ?"

"My group thinks . . ."

Tools For The Cooperative Classroom

READER



"Is everyone listening?"
"Is everything clear?"
"Shall I read any part again?"

Tools For The Cooperative Classroom

Photocopy this page
onto heavy paper or
card stock. Cut off
excess along dotted
line and cut in half.

← Cut in
half

CHECKER



"Can you explain . . . ?"
"Will you summarize . . . ?"
"Do you all understand . . . ?"
"Give an example of . . ."
"How did you get that answer . . . ?"
"Let's review . . ."

Tools For The Cooperative Classroom

PRAISER



"Good idea!"

"Thank you for . . ."

"I liked it when . . ."

"I like the way you . . ."

Photocopy this page
onto heavy paper or
card stock. Cut off
excess along dotted
line and cut in half.

Tools For The Cooperative Classroom

Cut in
half →

Create your own
role card

Tools For The Cooperative Classroom

Appendix J

Portfolios



Piecing Together My Portfolio



Work Samples					Comments
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					

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Note To Teacher: Duplicate this portfolio management chart for each student. Use the chart to help you (or the student) keep track of the work samples included in the student's portfolio. In the blanks, list each work sample; then mark the grading period for which it is included. At a glance, you and the student will be able to see what needs to be added to the portfolio.

Tools

Use this form to prompt a student to reflect upon a particular writing sample.

Reflections on a Written Sample

Name _____ Date _____

Title of Written Sample: _____

Type of Writing: _____

Audience: _____

My purpose in writing this piece was _____

I think I (was/was not) successful in achieving this purpose because _____

If I were to do this piece over, I would _____

My most effective (paragraph/sentence) is _____

because _____
